

REVISED VERSION

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
3 June 2004 (03.06.2004)

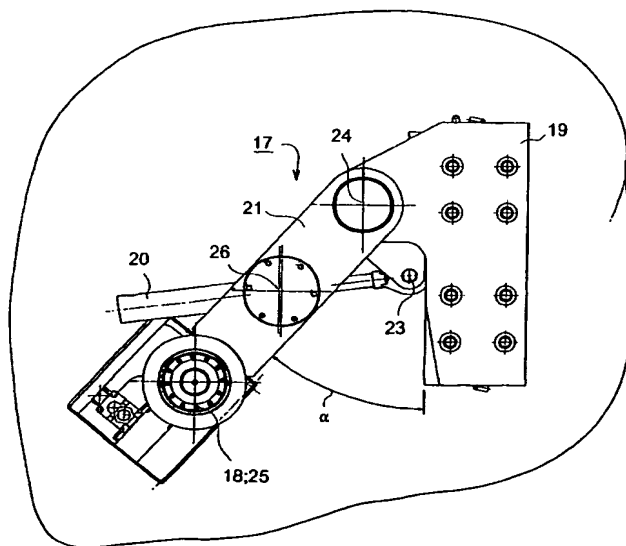
PCT

(10) International Publication Number
WO 2004/046004 A1

- (51) International Patent Classification⁷: **B65H 18/10**, 18/20, 18/02
- (21) International Application Number: PCT/FI2003/000853
- (22) International Filing Date: 11 November 2003 (11.11.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 20022037 15 November 2002 (15.11.2002) FI
- (71) Applicant (for all designated States except US): **METSO PAPER, INC.** [FI/FI]; Fabianinkatu 9 A, FIN-00130 Helsinki (FI).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **HAAPANEN, Jaakko** [FI/FI]; Huvilakatu 16 A 3, FIN-04400 Järvenpää (FI).
- (74) Agent: **FORSSÉN & SALOMAA OY**; Eerikinkatu 2, FIN-00100 Helsinki (FI).
- (81) Designated States (*national*): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, EG, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT (utility model), PT, RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: CORE LOCKING DEVICE



(57) Abstract: The invention relates to a core locking device comprising members (25) for locking the device (17) to a winding core of a roll to be wound on a two-drum winder, advantageously to a core, which device (17) is placed on a slide arranged in connection with the two-drum winder, which locking device (17) moves, as winding progresses, with the centre of the roll being formed along the slide. The device (17) comprises an actuator (20) to produce a counterforce for the force caused by the mass of the core locking device (17) in the changed position of the core locking device (17).



Published:

— *with international search report*

(15) Information about Correction:

see PCT Gazette No. 31/2004 of 29 July 2004, Section II

**(88) Date of publication of the revised international search
report:**

29 July 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

PCT/FI 03/00853

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B65H18/10 B65H18/20 B65H18/02

B. FIELDS SEARCHED

IPC 7 B65H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,A	WO 03/089352 A (WINDO KEVIN P ; VALMET ATLAS PLC (GB)) 30 October 2003 (2003-10-30) the whole document ---	1-10
A	US 5 620 151 A (UEYAMA MINORU ET AL) 15 April 1997 (1997-04-15) the whole document ---	1-10
A	EP 0 887 293 A (VOITH SULZER FINISHING GMBH) 30 December 1998 (1998-12-30) the whole document ---	1-10
A	US 4 887 926 A (KUNZ UDO) 19 December 1989 (1989-12-19) the whole document ---	1-10
	--- -/--	

☒ Patent family members are listed in annex.

"&" document member of the same parent family

23. 04. 04

Teija Rasch

National Application No

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Form PCT/ISA/210 (continuation of second sheet) (January 2004)

page 2 of 2

1950

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No.

PCT/FI 03/00853

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 03089352	A	30-10-2003	WO 03089352 A1	30-10-2003
			GB 2388106 A	05-11-2003
US 5620151	A	15-04-1997	JP 2033764 C	19-03-1996
			JP 6234444 A	23-08-1994
			JP 7053547 B	07-06-1995
			JP 2545331 B2	16-10-1996
			JP 7017659 A	20-01-1995
			JP 7024779 A	27-01-1995
			DE 4403330 A1	11-08-1994
			GB 2274835 A , B	10-08-1994
EP 0887293	A	30-12-1998	DE 19727327 A1	07-01-1999
			DE 59806149 D1	12-12-2002
			EP 0887293 A2	30-12-1998
US 4887926	A	19-12-1989	DE 3822106 C1	11-01-1990
			DE 8816525 U1	19-10-1989
			EP 0348806 A2	03-01-1990
			JP 2086526 A	27-03-1990
			JP 4076897 B	04-12-1992
GB 841305	A	13-07-1960	NONE	
DE 4017732	A	05-12-1991	DE 4017732 A1	05-12-1991
EP 1108669	A	20-06-2001	DE 19960000 A1	05-07-2001
			EP 1108669 A2	20-06-2001

CORRECTED
VERSION